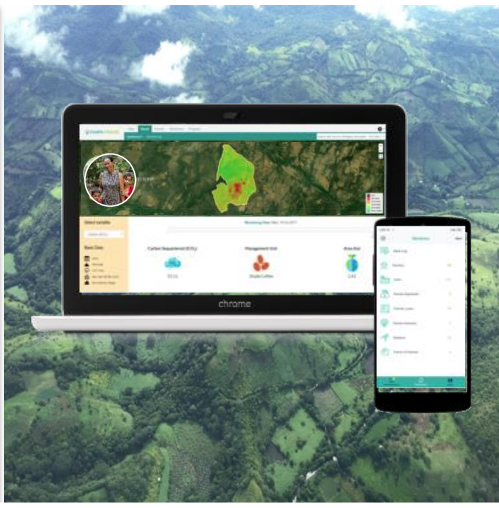
Cocoa Agroforestry in the Ivory Coast

Project Idea Note



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Summary Information

Project Title	Cocoa Agroforestry in the Ivory Coast
Project Location – Country/Region/District	This project is located within the Soubré commune and Bas-Sassandra District of Côte d'Ivoire. The project takes place on 2,501 hectares of the Necaayo cooperative's cacao plantations.
Project Coordinator & Contact Details	Name: Joachim Affian Title: Coordinator, Agricultural Engineer Organization: Necaayo Cooperative Email: joachimaffian@gmail.com, necaayo@yahoo.fr Mobile: +225 07541345
Summary of Proposed Activities	• 516 smallholder farmers will integrate 25-50 shade (wood and/or fruit) trees into their current cocoa production systems on a total area of 2500 ha • Establishing nurseries and tending and monitoring sapling growth/progress • Farmer coaching and training • The sales of non-timber forest products, and carbon offsets • The Necaayo cooperative will be coached and receive technical support on how to manage the carbon project, i.e. Education and training on agroforestry systems, climate change, and Taking Root's FARM-TRACE application
Summary of Proposed Target Groups	Target groups include the 516 UTZ certified farmers of the Necaayo cooperative that supplies cocoa to a Swiss chocolate manufacturer, Chocolat Frey.

Part A: Project Aims & Objectives

A1 The Plan Vivo project will encourage smallholder farmer innovation to increase agricultural productivity and sustainability. This project aims to increase the resilience of cacao farmers in the Necaayo Cooperative to the effects of climate change by introducing carefully selected shade trees (wood and fruit species) within their cacao plantations in Côte d'Ivoire. As a result, the project will help mitigate climate change by increasing the amount of carbon sequestered in the trees and the soil, thereby increasing long-term yields.

Taking Root, on behalf of myclimate, has developed a comprehensive plan to incentivize reforestation on over 2,501 hectares of cocoa plantations belonging to 516 farmers of the Cooperative, with the following sub-objectives:

- Implement sustainable agroforestry models that work for individual farmer needs
- Provide training and education to the project implementer and owner (Cooperative Necaayo) on climate change, FARM-TRACE, and agroforestry systems and their benefits
- Create new jobs for local populations (+35 jobs in the next 5 years)
- Improve cacao marketing (via improved land use management and credibility associated with project completion)
- Diversify farmer revenues to induce income security through the sales of carbon offsets, timber, and non-timber forestry products
- Plant 25-50 trees/hectare within the next five (05) years (sequestering 178,360 – 206,000 tCO2 in 10 years)

Part B: Proposed Project Area

B1

Description of Project Location

The proposed project takes place in Côte d'Ivoire, in the Bas-Sassandra District and Soubré commune. The main municipalities of the area are Soubré and Méagui. The Bas-Sassandra District is located in the South-West of Côte d'Ivoire, near the base of the remarkable Taï National Park. This popular tourist attraction occupies 3,300 km^2 in Côte d'Ivoire and

contains a rich rainforest with significant endemic species (Protected Planet 2020). This rainforest acts as one of the last remnants of the Upper Guinea rainforest and remains a designated UNESCO World Heritage Site (African World Heritage Sites 2018).

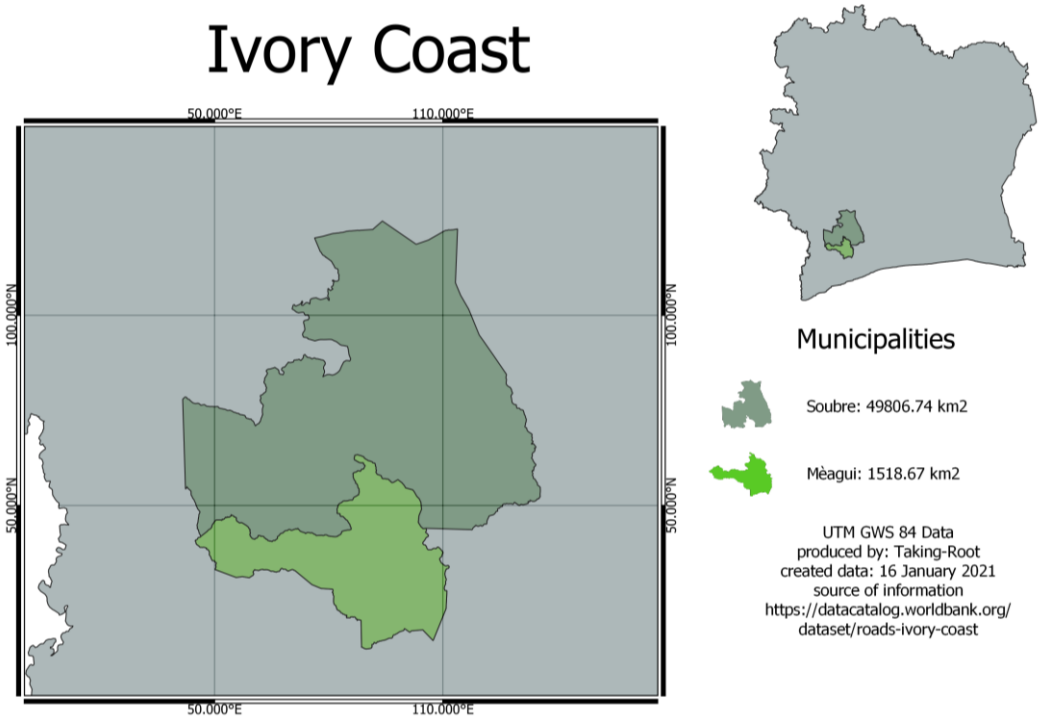

Figure 1: Location of Soubre and Meagui within Cote d'Ivoire

The moist tropics of Africa, in which this project resides, have a long growing period of over 270 days. Predominant land uses in this region are palm oil, rubber, plantain, robusta coffee, and cocoa crops. Cultivating cocoa in these regions faces many difficulties, for example, swollen shoot disease, ageing plantations, a flooded cocoa market with low resulting prices, and/or nutrient depleted soils from underdeveloped soil fertility management practices (Gockowski and Sonwa 2008). This region experiences an average annual rainfall of 1,400 - 4,500 mm with a bimodal seasonal regime. Wet seasons extend from March-June and September-October (Dumont *et al* 2014). Temperatures range from 21 - 37°C (World Weather Online 2020).

These lands are deteriorating from full-sun farming techniques and previous unsustainable land-use practices. Although Côte d'Ivoire has now banned deforestation for cocoa farming, the effects of deforestation continue to be felt. Thus, as climate change impacts escalate, implementing mitigating techniques for crop resilience becomes vital.

B2

Socio-Economic Context

Côte d'Ivoire alone has lost 85% (~13.5 million hectares) of its forests since 1960. A main driver of this deforestation is a result of cacao farmers clearing land in pursuit of better economic opportunities (UN-REDD 2018). The demand for cacao is only set to rise, with the cacao bean market expected to increase in size by 50% by 2025 (Grandview Research, 2019). To make matters worse, yields have been decreasing due to ageing plantations and diseases. As a result, there is now more pressure than ever for cacao farmers "to convert forests to farmlands, which threatens remaining forested and protected areas" (Kroeger et al 2017).

In the Côte d'Ivoire cacao is grown by 600,000 smallholder farmers with about 6 million people, 68% of the country's labour force, working in the cacao industry. Due to their small production volumes, smallholders are weakly connected to markets and often depend on multiple intermediaries before their cacao reaches the final buyer. This commonly results in low prices paid to the farmer (ESRI 2017).

Low-income smallholder farmers remain mostly unorganized and lack secure land tenure. Women are particularly vulnerable because of weaker land tenure rights and less access to assets, inputs and services. Additionally, smallholder farmers depend on rain-fed agriculture for their livelihoods, which increases their vulnerability to climate change.

Cocoa farming in Côte d'Ivoire has been largely successful as it is one of the largest producers of cacao in the world. Cacao farming is the principal agricultural activity in the area and thus provides the main source of income for inhabitants.

The current average income of local farmers remains low, at 300€ per month. Typical land holdings in this region are 5 hectares, 2 of which are dedicated to cacao. Income could be improved with sustained GDP growth and a stable cacao market. Through innovation, this project will lead to more resilient and sustainable crop yields for farmers, thereby increasing incomes.

Relevant governance structures involved in Côte d'Ivoire's agricultural sector are listed below in Table 1.

Table 1. Relevant governance structures

Government level	Structures
National	Ministry of Agriculture Ministry of Water and Forests Ministry of the Environment and Sustainable Development Café-cacao council
Regional	Regional council president Regional prefect Departmental prefect Sub-prefect
Village	Village chief

Part C: Identification of Target Groups & Communities

C1 The total population in the Soubré region is an estimated 940,000 inhabitants, 74% of whom live in rural areas. With the expansion of the cocoa sector, the population density has dramatically surpassed the national average with 76 people/km2 (Dumont *et al* 2014).

Necaayo cooperative and farmers

Necaayo farmers belong to various ethnicities and belief systems, most likely the result of the existence of a large diaspora within this region. The Necaayo cooperative, as well as its farmers, are the main stakeholders expected to benefit from the project. The cooperative consists of a Director, a Producers General Assembly, Administrative Council, and Supervising Council.

The Necaayo cooperative will be coached and trained in project implementation. They will be receiving performance-based payments based on tree growth to increase income security and compensate them for additional burdens, financed through the sale of carbon credits. The cooperative will also experience long-term benefits in the form of technical training and capacity building, access to capital, and being a pioneer in the region for sustainable cocoa production methods. Under this program, farmers will learn how to use the FARM-TRACE platform, understand the benefits of agroforestry, and learn more about climate change

impacts. With this knowledge, farmers are expected to increase cocoa yields, improve cocoa marketing, and boost climate change resilience.

Marginalized Groups and Gender Equity

The main affected marginalized group in this region are the Bakoué peoples. In addition to the Bete and Kouzie peoples, the native population constitutes a mere 30% of the total population of the area (Dumont *et al* 2014). These peoples are Indigenous to the Necaayo farmland and granted usage rights to the farmers over 30 years ago. The land has since been passed down to the younger generations of the original farmers.

Women in Soubré play an important role in the agricultural sector but remain marginalized with diminishing political rights. They have been reported to assist their husbands on farms but may also work directly as producers or participate in the Association for the Cultivation of Food Crops. Women in Côte d'Ivoire are subject to discriminatory practices that limit their access to land, credit, and income potential. The Côte d'Ivoire female population holds only 18% of agricultural lands, despite the nation's best income prospect being agriculture. This limits their opportunities to participate in sustainable economic activities such as this project.

Part D: Land Tenure & Carbon Rights

D1

Smallholder Land Tenure

The Necaayo cooperative cacao plantations overlap the traditional lands of the Bakoué peoples. Present day Necaayo farmers have either bought or leased their lands, or inherited them from their ancestors, who were granted customary rights by the Bakoué Chief 30 years ago. Thus, they are generally cultivating the lands they are born on.

The nature of the agreement allows the Necaayo cooperative to hold user rights, but not selling rights. Therefore, the Necaayo farmers have government-recognized rights, but not registered ownership, and their usage rights are legitimate, provided they abide by the customary laws of the Bakoué peoples.

This form of tenure is not uncommon amongst farmland in Côte d'Ivoire. In some areas of the country, a lack of standardized transfer methods and increasing land competition has created some conflict, although this is not currently an issue for Necaayo farmers and their lands. The Ministry of Agriculture, with the help of the Agence Foncière Rural (AFOR), is currently implementing the Rural Land Law (1998) to convert *de facto* rights into secure land ownership. Despite the law's adoption in 1998, only 0.3% of certifiable land (3,000 certificates) was formalized by 2016 (The World Bank, 2018). Certifications did not pick up until 2018 as a result of the civil war and other political conflicts (The World Bank, 2018). According to the World Bank, this law is expected to grant rural land tenure across 24 million hectares by 2028.

Forest Laws

Relevant forest laws within Côte d'Ivoire include the 1998 Rural Land Law and the 2019 Forestry Code. The former law applies to forest harvesting territory and unclassified forests in rural areas to promote smallholder ownership. The latter law pertains to state-owned public forests and community forests to regulate the exploitation of forests and their resources. Community forests, as defined by the Forestry Code, hold legal property title, however most community forests in Côte d'Ivoire are unregistered with the federal government. The Forestry Code permits harvesting forest products for traditional and subsistence use, often regulated by customary systems.

Carbon Rights

In general, carbon rights in Cote d'Ivoire have been declared the property of the State; the government may choose to either keep them for itself or to transfer them to another entity, including local communities, through contractual agreements (World Bank, 2020). However, most of these declarations concern REDD+ avoided emissions credits; there does not appear to be any explicit treatment of carbon storage through agroforestry.

For REDD+ specifically, the State is the exclusive owner of carbon rights on state, public, and private forests. In rural areas, the State is again the owner of REDD+ carbon rights under any international programme to which it has subscribed. If there is no international programme covering the area, the State remains the owner, but transfers the rights to a third-party entity that shares the benefits of the REDD+ program according to a benefit-sharing plan (Ministère

de L'Environnement et du Développement Durable, 2020).

The World Bank also suggests that the right of ownership of avoided, reduced, or stored carbon is separate from the right to obtain all or part of the associated benefits, and, therefore, that reducing carbon results in subjective rights for the person who carried out the activities that created the reductions. Stored or avoided carbon is considered a form of 'fruit' of the tree and is therefore 'harvested' by the owner of the property that produces it or by others who hold rights to the land or trees.

Therefore, in the absence of any direct treatment of agroforestry and/or emissions removals in official documents, it is suggested that the World Bank's analysis applies.

Lastly, the definition of forest used in the development of the Forest Reference Emissions Level (FREL) entails a minimum land area of 0.1 ha, minimum tree height at maturity of 5m, and minimum canopy cover of 30%. Forests and forest plantations under this category are distinct from perennial croplands such as cocoa, which is considered agricultural land (UNFCCC, 2018).

Thus, given that:

a) this is not a REDD+ project and therefore not covered by any international program;
b) carbon is considered the 'fruit' of the tree, and the 'fruit' belongs to the owner of the property or the rights holder, which in this project is the farmer, as per the explanation of the tenure regime; and
c) agroforestry lands are not considered forest lands,

no challenges to carbon rights are expected.

Part E: Project Interventions & Activities

E1

Ecosystem rehabilitation

Necaayo's cocoa plantations, although technically meeting the density requirements of the Plan Vivo Standard, do not reach the same capacity or efficiency as a regular forest. This can

be improved with the integration of specialized shade trees which will assist in the recovery of natural ecosystem structure, functions, and services. Specifically, increased diversity improves crop resilience to disease, balances soil nutrients, and restores soil permeability. A higher density plantation model will also greatly decrease soil erosion and degradation which will, in turn, stabilize the long-term yield of cocoa trees. The shade trees will be selected from native species according to their level of desirability by farmers, their carbon sequestration rate, and the commodities they provide. As a result, this project will discourage deforestation motivated by agricultural expansion, and improve biodiversity and ecosystem services and health, by preserving and improving current cropland through a denser, more productive plantation system.

Improved Land-Use Management

Training farmers in proper land-use and forest management is expected to improve long-term sustainability once the PES payments have concluded in year 10. This will help to mitigate and adapt to climate change impacts by increasing carbon sequestration, improving ecosystem services, and increasing resilience. Diversified crop systems also require less pesticides and other agrochemicals as a result of increased crop resilience. This can improve cost-effectiveness and generate more desirable agricultural products. Operating agroforestry systems will help to provide more marketing opportunities for the Necaayo cooperative as a leader in cocoa agroforestry for the region.

FARM-TRACE

FARM-TRACE is an application designed by Taking Root to help facilitate tree monitoring and certification processes. This type of technology is critical for consistently monitoring trees, forest cover, and carbon over time. The Necaayo cooperative has been previously exposed to a similar parcel-tracing program (First Mile) under the Rainforest Alliance. However, it was unsuccessful due to a lack of incentive, funding, and skills training. The First Mile platform contains most of Necaayo's previous financial transactions, farm size, and farmer ID numbers, which are used to verify UTZ compliance. Although UTZ has different standards than this project, the main objectives, including increasing forest cover are similar.

A Taking Root consultant or representative will train the participating farmers in accurately measuring and documenting species using the FARM-TRACE mobile app. This application combines satellite imagery with ground information to provide an overview of parcel location,

their carbon content, and productivity. After 3 years, FARM-TRACE will have enough data to automate carbon sequestration using satellite imagery exclusively. With additional training and the FARM-TRACE application, Necaayo will be able to submit annual reports meeting the Plan Vivo requirements in a timely manner.

Taking Root will also ensure there is no duplication of work with the existing First Mile platform, and that FARM-TRACE only creates additional value for Necaayo.

Part F: Identification of Any Non-Eligible Activities

F1

Tree Nursery

Integration of shade trees has been previously attempted by Necaayo in 2016. However, a lack of quality genetic materials resulted in an extremely low survival rate. The original objective of planting 7,000 to 10,000 trees per year was not attained; only 250 trees survived in 2017-18. Although the trees were distributed to farmers with the goal of reforestation, the project was not able to ensure the success of trees that were planted. The project proposed here is implementing a nursery program with a better source of genetic materials, as well as a performance-based payment system that encourages and monitors the successful growth of saplings and trees planted. This innovation will greatly improve the quality of shade trees and create long-term successes in tree survival rate.

Part G: Long-Term Sustainability Drivers

G1

Côte d'Ivoire Development Objective

Côte d'Ivoire is a signatory country to the United Nations Framework Convention on Climate Change, with a national emissions reduction target of 28% by 2030. A National REDD+ Strategy was formulated in 2016 with the goal to reduce deforestation by 80% compared to the 2015 baseline in classified forests and protected areas and the restoration of 5 million

hectares of degraded land by 2030. The government is also engaged in an ambitious zero-deforestation agriculture policy to fast-track the implementation of low carbon investments in the forestry and land use sector. Efforts towards accelerating low carbon investments have also been made by the private sector in Cote D'Ivoire, particularly by companies involved in the Cocoa and Forest Initiative and through collaborations with the GCF.

Côte d'Ivoire submitted its first Nationally Determined Contribution (NDC), in line with the Paris Agreement, but has not yet updated it. The NDC contains a number of intended activities relevant to this project, all of which can be summarized under the key message of 'agriculture with zero deforestation'. These include establishing payment for environmental services (PES) incentive schemes to encourage village reforestation and conservation of natural forests in rural areas, promoting agroforestry, and encouraging reforestation. Most of these are linked to the goal of improving agricultural practices to reduce emissions from deforestation and degradation.

As an underdeveloped country, Côte d'Ivoire does not possess the means or the resources to implement land cover emissions strategies entirely on its own. As a result, many activities, such as forest and savannah rehabilitation and/or reforestation or enhancing carbon stocks in degraded forests through smallholder reforestation, are linked to international support, and the locations and deadlines for these activities are not specified in detail.

In addition to enhancing ecosystem services, the NDC also covers topics such as the diversification of revenue sources; increased employment; and restoring biodiversity and natural habitats. The Necaayo Plan Vivo project thus falls directly in line with Côte d'Ivoire's development objectives of improving well-being in rural communities, promoting agroforestry and sustainable agricultural practices, and increasing climate change resilience.

High-Value Sustainable timber

Shade tree species will be selected based on the following criteria:

1) Species that maintain or increase cacao yields
2) Species with fruits or NTFPs that provide the best market value
3) Species with fruits or NTFPs preferred by the farmers' wives or women of the community and cooperative

The project has estimated a range for the ratio of shade to cacao trees on each plantation. Adaptations within this range are permitted to suit farmers who may benefit from a different model. It should be noted that in addition to high-value timber, farmers will continue to harvest various non-timber forest products such as fruit, fuelwood, and medicine. The species will be selected based on the above criteria, along with farmer and community input.

Ecotourism

Ecotourism in this region is mainly centered around the nationally designated Taï National Park. This World Heritage Site protects some of the last remaining tropical forests in West Africa, providing significant natural habitat for several species of endangered apes, threatened mammals, and diverse flora (World Heritage Site 2020). The chimpanzees in particular are a highly valued and charismatic species for the Taï forest and the regions tourism interest (World Heritage Site 2020).

Another important species for Bas-Sassandra are sea turtles. Out of the seven species of sea turtles in the world, Bas-Sassandra beaches host vital nesting grounds for four species (green sea turtle, leatherback sea turtle, olive ridley sea turtle, and the hawksbill sea turtle) (UNESCO 2020). Unfortunately, this area is subject to poaching and degradation practices therefore, generating international/local awareness, funding, and the implementation of surveillance and protection programs is vital to habitat preservation. Ecotourism development in this region helps generate more income for locals and international interest and research in preserving biodiversity.

Part H: Applicant Organisation & Proposed Governance Structure

H1

Myclimate

Myclimate is a non-profit organization focused on supporting local and global climate protection projects. They have successfully assisted and implemented 125 climate projects with voluntary CO2 compensation measures, advisory services, and educational programs in 37 countries to the highest standard (the Plan Vivo and Gold Standards).

Myclimate has a partnership with the leading Swiss supermarket chain Migros to develop carbon projects within their supply chain to offset their flight emissions. Since their chocolate brand, Chocolat Frey, sources all their West African cocoa from the Necaayo cooperative, myclimate plans to develop this insetting project within Necaayo's farms. Myclimate is partnering with Canadian reforestation not-for-profit, Taking Root, to support Necaayo in growing shade trees on their cacao plantations through agroforestry techniques, to create certified carbon credits. Myclimate, through funding from Migros, will be responsible for funding project development and certification costs. They will also act as a purchaser of carbon offsets given that the project successfully meets the Plan Vivo Standard requirements.

Necaayo Capacity and Experience

Necaayo will be acting as the project owner and applicant organization. A feasibility assessment was conducted for the Necaayo cooperative to determine their capacity and experience to undertake a carbon project. Administrative tasks such as the distribution of farmer payments, timely correspondence, and transaction organization were observed. During site visits in 2019, it was noted that transactions, ID numbers, and farm size were adequately recorded and with multiple copies on the First Mile platform. Correspondence also exceeded expectation and produced requested information in a timely manner. Necaayo's reputation also presents positive relationships with local authorities and confirms their ability to obtain documentation. In terms of operational capacity and experience, Necaayo has appropriate infrastructure and labor forces but will require some capacity building and technical training to implement the project. All farms are relatively accessible with fully navigable road networks. Overall, Necaayo demonstrated a high capacity to carry out a Plan Vivo project.

Taking Root

Taking Root will be acting as a consultant coach, hired by Myclimate for their experience as a Plan Vivo project developer. Taking Root is a non-profit organization working towards reducing global emissions and decreasing poverty through data driven reforestation models and innovative technology targeting smallholder farmers in the tropics. Taking Root will be offering project support in the form of farmer training and a free license to use their FARM-TRACE application, which will help facilitate the composition of Necaayos' annual report. Additionally, Taking Root will provide services that include agroforestry development methods

and Plan Vivo project management.

Rainforest Alliance

The Rainforest Alliance is a multi-directional international non-profit organization tackling climate change, human rights issues, rural prosperity, responsible business, and forest ecosystem health.

Necaayo currently works with Rainforest Alliance to collect and report farming data to achieve certification. Working closely with Necaayo and Rainforest Alliance, Taking Root will see how FARM-TRACE can integrate with existing systems and certification processes to ensure no duplication of work is required by Necaayo and they only create additional value through the use of the platform. This could involve integrating with existing systems or building new features to include Rainforest Alliance reporting requirements within the FARM-TRACE platform.

Although they are not actively involved in the Plan Vivo project, they have been informed and consulted on project activities based on their previous involvement with Necaayo. The Rainforest Alliance has also established the use of the First Mile platform which is similar to FARM-TRACE in its geospatial polygon marking and is currently used by Necaayo for administrative purposes. The Plan Vivo project will exceed the voluntary standards set by the Rainforest Alliance and will therefore present no conflicts.

H2

Table 2. Applicant Organization Information (Necaayo)

Legal Status	Non-governmental organization
Long-term objectives of the organization	• Continue to produce quality (Grade 1 & 2) cocoa to be sold on the market • Generate better opportunities for communities at the economic, social, and environmental level

Brief history and achievements	The Necaayo cooperative, founded in 2011, has been committed to UTZ and Fairtrade programs for community well-being. Currently, Necaayo has acquired 1410 members managing ~7000 hectares of cocoa. Achievements: • 120 tonnes of fertilizers are made available to members to strengthen soil fertility annually • Each year, more than 70,000 CNRA cocoa plants are distributed free of charge to members (Necaayo, 2020). • Reformation of the 9 km Guiré-Allakro road to facilitate the evacuation of products from the section • Over 3,500 tonnes of cocoa sold • Two standalone certificates • Guaranteed partnerships

Part I: Community-Led Design Plan

I1 This project will be implemented using the principles of free, prior, and informed consent (FPIC). Participating farmers will be adequately consulted on project objectives and given opportunities to present input on desired outcomes. Informed consent and training will be an ongoing and evolving process to ensure the project continues to meet the Plan Vivo standards.

Affected minority groups will also be identified and informed of project intent. Women and Bakoué peoples in particular will be interviewed to determine the best methods and processes to support their involvement. Interested stakeholders such as the Ministry of Environment will also be consulted on the project plan to ensure that there were no overlapping conflicts. Site visits were conducted over a one-week period from August 21st to

August 28th, 2019. During this time, interviews and workshops took place to determine Necaayo's operational and administrative abilities. Additionally, several plantations and farmer concerns were assessed to identify potential disturbances and facilitate long-term success. Incentivising sustainability will also help the project come to full fruition and produce benefits for Necaayo, its members, and the environment.

Part J: Additionality Analysis

J1

Additionality Analysis

This project would likely not have been independently economically viable, nor is it the product of a legislative decree or a commercial land-use initiative.

The Necaayo cooperative has previously attempted shade tree integration independently with the help of Rainforest Alliance. Unfortunately, Necaayo's plan to grow 10,000 trees annually was unsuccessful due to poor quality planting materials. The Rainforest Alliance intervention set a voluntary participation standard at a much lower density of 12 shade trees per hectare (Gouda, Jean-Marc, pers.comm 2019). The Plan Vivo project will provide suitable seed sources with good genetic materials and will initiate a higher planting density. Without Myclimate intervention, 50% of Necaayo farmers were planting at a density of less than 12 trees. Myclimate intends to increase their baseline to 25-50 trees per hectare. Planting at these densities is not common practice in Côte d'Ivoire and could present considerable opportunities for Necaayo, the environment and for implementing national development goals. The Necaayo cooperative does not possess the financial and technical means to implement a reforestation project at this scale.

Although the 516 farmers in this project are currently UTZ certified, which in theory requires shade tree cover, field visits have confirmed that most farms do not have shade tree cover or at a very low density. The previous attempt at shade tree integration was intended to address this but was unsuccessful.

This project will thereby create a material increase in the number of shade trees, thereby

meeting both the additionality requirement as well as the standards of the Rainforest Alliance and Plan Vivo. This project will keep farmers incentivized through more frequent performance-based payments and continuous monitoring to secure project success.

Table 3. Barriers to Project Implementation

Barriers	Description of Barriers	Proposed Solution
Cooperative staff & farmer qualifications	- Staff and/or farmers must be able to use the FARM-TRACE application reliably and accurately to properly monitor tree growth. - Necaayo must be able to create annual reports for Plan Vivo with assistance from Taking Root.	-Staff and/or farmers will partake in workshops for the FARM-TRACE mobile app and how it can be used to generate annual reports. -Farmers will also be informed of agroforestry systems and their mitigating effects on climate change.
Reduced Productivity	-Excessive growth of overstory shade trees could limit growth of cocoa. -Cocoa may produce thin, light-seeking stems, inadequate for pod production. -Insufficient light may lead to a smaller cocoa harvest.	-BAHA (maximum basal area per hectare) will be used to limit overshadowing of the cocoa understory. -The most productive cocoa yields contained a BAHA limit of 4m^2
Farmers' incentives	-Farmers may lose interest in project activities (pruning, planting, general maintenance) over the years. -Farmers may not receive as many benefits from shade tree harvests.	-Instead of receiving payments when carbon credits are generated every 5 years, farmers will receive smaller payments a few times a year to maintain interest. -Farmers will also receive incentive from better cocoa yields and improved soil quality. -Shade trees were selected to

		present multiple benefits to farmers.
Deforestation Activities	-Deforestation is prominent in agriculture when poor soil, cocoa diseases and low cocoa prices pushes farmers to expand their crops into surrounding forest land. - This greatly impacts soil quality, diversity, and habitat in the surrounding forests. Mass deforestation also contributes to climate change.	-Deforestation in these regions will decrease from the more efficient and productive use of crop soil and increased harvests. -Higher income from proposed agroforestry activities will disincentivize crop expansion into surrounding forests.
Establishment Costs	-Project implementation requires upfront payments by farmers. Farmers may struggle to cover these costs before receiving project benefits	-If farmers choose to invest in this project, they will receive more payments than they would have acquired on their own. -Long-term benefits should outweigh the short-term burden of purchasing and tending to seedlings.
Double Counting	-The risk of multiple credit industries claiming carbon reduction from the same project.	-Approval from the relevant authorities will ensure that the project area will not be used by any other national/regional level GHG emissions accounting program for the duration of the project. This should eliminate the registration of carbon credits for the same ecosystem service.

Part K: Notification of Relevant Bodies & Regulations

K1

Evidence of the notification of relevant national regulatory body

This project intends to comply with all regulations implemented by the NDC Focal Point of Côte d'Ivoire under the supervision of the Ministry of Environment and Sustainable Development. A copy of the notification letter is attached.

Part L: Identification of Start-Up Funding

L1 Before full registration, the project will be funded by Myclimate in partnership with MIGROS. Funds will be allocated towards operational, administrative, and certification costs, specifically farmer coaching and training, third-party audits, and documentation preparation. Farmers will also receive performance-based interval payments to cover some of the costs incurred during seedling growth and establishment. Myclimate will later act as a purchaser of carbon offsets given that the project meets the requirements set by Plan Vivo.

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